

## CLAIMS

1. A method for providing communication in a multi-band multi-protocol hybrid wired/wireless network, the method comprising:

determining a protocol associated with a communication signal for an access point;

allocating a processor compatible with said determined protocol; and

processing said communication signal by said allocated processor.

2. The method according to claim 1, further comprising selecting said allocated processor from a pool of available processors for said processing of said communication signal.

3. The method according to claim 2, wherein said allocating further comprises updating said processor to be capable of said processing of said communication signal.

4. The method according to claim 3, wherein said updating further comprises downloading protocol code compatible with said determined protocol to said processor.

5. The method according to claim 4, further comprising storing said compatible protocol code in a memory.

6. The method according to claim 5, wherein said downloading further comprises retrieving said compatible protocol code from a portion of said memory.

7. The method according to claim 6, further comprising associating said determined protocol code with said portion of said memory.

8. The method according to claim 1, further comprising tuning at least one transceiver device to at least one of a receive and a transmit frequency associated with said communication signal.

9. The method according to claim 1, wherein said processor is a digital signal processor (DSP).

10. The method according to claim 1, wherein said protocol is one of an 802.11a, 802.11b, 802.11g and Bluetooth protocol.

11. A machine-readable storage, having stored thereon, a computer program having at least one code section for providing communication in a multi-band multi-protocol hybrid wired/wireless network, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining a protocol associated with a communication signal for an access point;

allocating a processor compatible with said determined protocol; and  
processing said communication signal by said allocated processor.

12. The machine-readable storage according to claim 11, further comprising code for selecting said allocated processor from a pool of available processors for said processing of said communication signal.

13. The machine-readable storage according to claim 12, wherein said allocating further comprises code for updating said processor to be capable of said processing of said communication signal.

14. The machine-readable storage according to claim 13, further comprising code for downloading protocol code that is compatible with said determined protocol to said processor.

15. The machine-readable storage according to claim 14, further comprising code for storing said compatible protocol code in a memory.

16. The machine-readable storage according to claim 15, further comprising code for retrieving said compatible protocol code from a portion of said memory.

17. The machine-readable storage according to claim 16, further comprising code for associating said determined protocol code with said portion of said memory.

18. The machine-readable storage according to claim 11, further comprising code for tuning at least one transceiver device to at least one of a receive and a transmit frequency associated with said communication signal.

19. The machine-readable storage according to claim 11, wherein said processor is a digital signal processor (DSP).

20. The machine-readable storage according to claim 11, wherein said protocol is one of an 802.11a, 802.11b, 802.11g and Bluetooth protocol.

21. A system for providing communication in a multi-band multi-protocol hybrid wired/wireless network, the system comprising:

at least one first processor adapted to determine a protocol associated with a communication signal for an access point;

said at least one first processor adapted to allocate a second processor compatible with said determined protocol; and

said second processor adapted to process said communication signal.

22. The system according to claim 21, further comprising at least one selector adapted to select said second processor from a pool of available processors for said processing of said communication signal.

23. The system according to claim 22, wherein said at least one processor includes at least one updating processor adapted to update at least one of said pool of available processors to be capable of said processing of said communication signal.

24. The system according to claim 23, wherein said updating processor is further adapted to download protocol code compatible with said determined protocol to said second processor.

25. The system according to claim 24, further comprising a memory adapted to store said compatible protocol code.

26. The system according to claim 25, wherein said updating processor is adapted to retrieving said compatible protocol code from a portion of said memory.

27. The system according to claim 26, wherein said first processor is adapted to associate said determined protocol code with said portion of said memory.

28. The system according to claim 21, further comprising at least one transceiver integrated within the access point which is adapted to tune to at least one of a receive and a transmit frequency associated with said communication signal.

29. The system according to claim 28, wherein at least one of said first processor and said second processor is a digital signal processor (DSP).

30. The system according to claim 29, wherein said protocol is one of an 802.11a, 802.11b, 802.11g and Bluetooth protocol.

31. The system according to claim 30, wherein said at least one integrated transceiver utilizes a single protocol stack for processing said communication signal for said 802.11a, 802.11b, 802.11g and Bluetooth protocols.